

REMARKS/ARGUMENTS

Claims 11 to 14 and 18 to 27 were rejected under 35 U.S.C. §102(b) as being anticipated by Roxendal et al. (WO 99/27879 A2). Claims 15 to 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Roxendal et al. (WO 99/27879 A2).

Reconsideration of the application is respectfully requested.

Rejections under 35 U.S.C. §102(b): Roxendal

Claims 11 to 14 and 18 to 27 were rejected under 35 U.S.C. §102(b) as being anticipated by Roxendal et al. (WO 99/27879 A2).

Roxendal et al. discloses an incontinence guard 1 comprising a liquid pervious top layer 2, a liquid impervious back layer 3 and an absorbent body 4 enclosed therebetween. (See Roxendal et al., page 4, lines 8 to 10). Furthermore, a porous and resilient liquid acquisition layer 5 is arranged between the liquid pervious top layer 2 and the absorbent body 4. (See Roxendal et al., page 4, lines 10 to 11).

Independent claim 11 recites “a transfer layer for a liquid fluid and for application in an absorbent article of personal use, the transfer layer comprising: a top layer of predominantly hydrophobic fibrous material; a bottom layer of predominantly hydrophilic material superimposed on the top layer and joined to the top layer at a plurality of joining regions of the top and bottom layers so as to form a plurality of channels at the joining regions, a plurality of peaks being formed of the top and bottom layers between adjacent ones of the plurality of channels, wherein a transversal thickness of the top and bottom layers is lower at the joining regions than at the peaks.”

Applicants note that U.S. Patent (U.S. Patent No. 6245901 to Roxendal) which corresponds to WO99/27879 to Roxendal as cited in the Office Action is discussed in the present specification at page 2, full paragraph 3 under “Foregoing of the Invention” through page 4.

The Office Action asserts that “Roxendal teaches that layer 5(d) is less hydrophilic than, hence more hydrophobic than, subjacent hydrophilic layer (5e).” See Office Action, page 5, full paragraph 6.

The phrase “less hydrophilic” even if hypothetically used to describe a top layer would not suggest “a top layer of predominantly hydrophobic fibrous material” as recited in claim 11 of the present invention. Just because it is less hydrophilic does not mean in any way that it is “predominantly hydrophobic.”

As noted in Applicant’s previous Response, Roxendal does not show “the transfer layer comprising: a top layer of predominantly hydrophobic fibrous material” as claimed. Roxendal discloses the material layer 5 has been used as an acquisition layer 5 underneath a liquid pervious top layer 2. (See Roxendal et al., page 4, lines 10 to 11). The layer 5 can also contain at least two different types of fibres 9, which constitute the different zones 5a-e. (See Roxendal et al., page 10, lines 23 to 24). Roxendal discloses that fibers of a higher thickness can be used in an upper layer 5d and thinner fibres in the lower layer 5e, whereby a pore size gradient is created in the z-direction of the layer which facilitates the liquid transport in the z-direction. (See Roxendal et al., page 11, lines 18 to 20). Roxendal discloses that hydrophilic fibres can be used in the central zone 5b and hydrophobic fibres in the edge portions 5a and c, in order to create side barriers against liquid spreading out towards the edges. (See Roxendal et al., page 11, lines 30 to 33). However, Roxendal does not show or teach that the transfer layer (5d) comprises a top layer of predominantly hydrophobic fibrous material. In fact, it is hydrophilic as in this direction the layer 5d is attempting to pass liquid. Roxendal merely discloses that a hydrophilicity gradient may be created in the z-direction of the layer 5 by means of arranging fibres with increasing hydrophilicity from the upper 5d towards the lower layer 5e. Roxendal does not show or teach at all that the transfer layer (5d) comprises a top layer of predominantly hydrophobic fibrous material, (See Roxendal et al., page 12, lines 14 to 16), and a fair reading of the disclosure indicates that 5d is not hydrophobic like the side zones 5a, 5c.

Even under the Office Action assertion that ““predominantly hydrophobic” means that the layer 5(d) is chiefly non-water retaining relative to the “predominantly hydrophilic “ layer (5e) that is chiefly water retaining relative to layer (5d)”, does not mean in any way that it is “predominantly hydrophobic.”

Withdrawal of the rejection to independent claim 11 and its dependent claims under 35 U.S.C. § 102 (b) is respectfully requested.

With respect to independent claim 24, claim 24 recites: an article for the absorption and retention of a liquid fluid, comprising: a cover permeable to fluids and configured to be in contact with a user's skin; a transfer layer provided below the cover, the transfer layer including a top layer of predominantly hydrophobic fibrous material and a bottom layer of predominantly hydrophilic material superimposed on the top layer and joined to the top layer at a plurality of longitudinal joining regions of the top and bottom layers so as to form a plurality of channels at the joining regions, a plurality of peaks being formed of the top and bottom layers between adjacent ones of the plurality of channels, wherein a transversal thickness of the top and bottom layers is lower at the joining regions than at the peaks, wherein the channels are in contact with the cover; an absorbent core configured to absorb and retain the liquid fluid.

Roxendal also does not show or teach that the transfer layer (5d) includes “a top layer of predominantly hydrophobic fibrous material and a bottom layer of predominantly hydrophilic material superimposed on the top layer and joined to the top layer at a plurality of longitudinal joining regions of the top and bottom layers so as to form a plurality of channels at the joining regions, a plurality of peaks being formed of the top and bottom layers between adjacent ones of the plurality of channels, wherein a transversal thickness of the top and bottom layers is lower at the joining regions than at the peaks, wherein the channels are in contact with the cover; an absorbent core configured to absorb and retain the liquid fluid” as claimed.

Withdrawal of the rejection to claim 24 and its dependent claims under 35 U.S.C. § 102 (b) is respectfully requested.

35 U.S.C. 103(a) Rejections- Roxendal

Claims 15 to 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Roxendal et al. (WO 99/27879 A2).

In view of the comments above with respect to claim 11, withdrawal of the rejections to the dependent claims 15 to 17 under 35 U.S.C. § 103 (a) is respectfully requested.

With further respect to claims 15 to 17, as admitted in the Office Action, “Roxendal does not expressly disclose the specifically claimed dimensional limitations and fiber density” as claimed. See Office Action, page 5, full paragraph 4. The Office Action then asserts that “[m]ere changes in size alone are not sufficient to patentably distinguish a claimed invention

over the prior art. See Office Action, page 5, full paragraph 4.

As stated in the present specification, the Roxendal absorbent article “is constructed with a layer of continuous fibers, frequently called “TOW”, bonded among each other at distinct points, lines or sectors according to a pattern, while in other parts they are not bonded.” See present specification, page 2, full paragraph 3 under “Foregoing of the Invention” through page 3, line 1. Although the absorbent article of Roxendal may present certain structural differences concerning the design of the transfer layer, it is not expressly stated that the aforementioned problems are solved by referring to the structure of the conventional absorbent articles and particularly referring to the passage of the liquid fluids through the transfer layer.

Figure 4 of Roxendal, shows that the bonding method provided in the transfer layer have a pattern of many straight paths with an alternating orientation among each other and a transversal orientation with respect to the longitudinal orientation of the fibers which the transfer layer is made of.


From the description and illustration of the absorbent article of Roxendal it must be concluded that the segments and points or sectors of union constructed in the transfer layer serve the purpose of consolidating or reinforcing the internal structure formed by the fibers which the transfer layer is composed of. Whatever configuration be adopted it does not contribute to improving the capacity of absorption and transfer of the liquids which pass through the absorbent layer and must be retained in the absorbent core.

In view of the comments above, withdrawal of the rejections to the dependent claims 15 to 17 under 35 U.S.C. § 103 (a) is respectfully requested.

CONCLUSION

The present application is respectfully submitted as being in condition for allowance and applicants respectfully request such action.

Respectfully submitted,
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